



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,314	01/28/2004	Stuart Lynch Blackburn	1033-NW1001	1206
34456	7590	12/27/2005	EXAMINER	
TOLER & LARSON & ABEL L.L.P. 5000 PLAZA ON THE LAKE STE 265 AUSTIN, TX 78746			HOM, SHICK C	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/766,314	Applicant(s) BLACKBURN, STUART LYNCH	
	Examiner Shick C. Horn	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/6/05, 10/21/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 and 12-17 of copending Application No. 10/842,842. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

Art Unit: 2666

For claims 1-6, the claims 1-6 of copending application 10/842,842 disclose a method of configuring a data network, the method comprising: determining a bandwidth capacity of a communications link connecting a digital subscriber line access multiplexer (DSLAM) and an asynchronous transfer mode (ATM) switch based on a first user type selected from a plurality of user types, each of the plurality of user types having a different bandwidth capacity; determining an average peak bandwidth per user value based on the first user type; determining a data transmission slowdown indicator that includes a slowdown amount and a probability of experiencing a slowdown event; determining an estimated maximum number of users of the first user type for digital subscriber lines that may be supported by the DSLAM, where the estimated maximum number of users of digital subscriber lines is based on the average peak bandwidth per user value, the bandwidth capacity of the communication link, and the customer data transmission slowdown indicator; and configuring the data network such that the DRAM has a configured number of users of digital subscriber lines that is less than or equal to the estimated maximum number of users of digital subscriber lines (see claim 1);

Art Unit: 2666

wherein the estimated maximum number of users of digital subscriber lines is further based on a probability of a random user downloading data at a given period of time (see claim 2); wherein the estimated maximum number of users of digital subscriber lines is further based on an Erlang model calculation (see claim 3);

wherein the communication link is one or more DS3 type communication links or an OC3 type communication link (see claim 4);

wherein the estimated maximum number of users of digital subscriber lines is calculated with an assumption that a first set of users of the first user type download data at the same data transfer speed and a second set of user having a second user type download data at a different data transfer speed (see claim 5);

wherein the data transfer speed is about 1.5 Mbits/second and wherein the different data transfer speed is at least one of an integer multiple of 1.5 Mbits/second, an integer multiple of 384 kb/second, or an integer multiple of 192 kb/second (see claim 6).

For claims 7-9, the claims 7-9 of copending application 10/842,842 disclose a method of configuring a data network, the

Art Unit: 2666

method comprising: determining a user type selected from a set of available user types, each of the available user types associated with a different bandwidth capacity; determining an average peak bandwidth per user value for the data network and based on the user type; determining a capacity of a communication link connecting a remote terminal (RT) to asynchronous transfer mode (ATM) switch via an optical concentrator device, the capacity based on the bandwidth capacity associated with the user type; determining a data transmission slowdown indicator that includes a slowdown amount and a probability of experiencing a slowdown event; determining an estimated maximum number of users that may be supported by the RT, where the estimated maximum number of users is based on the average peak bandwidth per user value, the capacity of the communication link, and the customer data transmission slowdown indicator; and configuring the data network such that the RT has a configured number of users of the subscriber lines that is less than or equal to the estimated maximum number of users that may be supported by the RT (see claim 7); wherein the communication link comprises a plurality of T1 transmission lines (see claim 8); wherein the communication link comprises one of an OC3 and one or more DS3 links (see claim 9).

Art Unit: 2666

For claim 10, the claim 10 of copending application 10/842,842 disclose a data communications system comprising: a plurality of digital subscriber lines; a digital subscriber line multiplexer coupled to each of the plurality of digital subscriber lines; and a data switch coupled to the digital subscriber line multiplexer via a communication link; wherein the data communications system is configured such that the number of digital subscriber line users supported by the digital subscriber line multiplexer is determined based on an estimated maximum number of users, the estimated maximum number of users determined based on an average peak bandwidth per user value, a data communication capacity of the communication link, and a data transmission slowdown indicator, wherein the data communication capacity is determined based on a type of user selected from a set of available user types (see claim 10).

For claims 11-16, the claims 12-17 of copending application 10/842,842 disclose a data communications system comprising: a plurality of digital subscriber lines; a remote terminal device coupled to each of the plurality of digital subscriber lines; and a data switch coupled to the remote terminal device via a communication link; wherein the data communications system is

Art Unit: 2666

configured such that the number of digital subscriber line users supported by the remote terminal device is determined based on an estimated maximum number of users, the estimated maximum number of users determined based on an average peak bandwidth per user value, a data communication capacity of the communication link, and a data transmission slowdown indicator, wherein the data communication capacity is determined based on a type of user selected from a set of available user types (see claim 12);

wherein the estimated maximum number of users of digital subscriber lines is further based on a probability of a random user downloading data at a given period of time (see claim 13); wherein the estimated maximum number of users of digital subscriber lines is further based on an Erlang model calculation (see claim 14);

wherein the communication link is one or more DS3 type communication links, an OC3 type communication link, or one or more T1 type communication links (see claim 15);

wherein the estimated maximum number of users of digital subscriber lines is calculated with an assumption that a plurality of different users having the same user type download data at the same data transfer speed (see claim 16);

Art Unit: 2666

wherein the data transfer speed for the user type is about 1.5 Mbits/second (see claim 17).

The application's claims 1-6 merely broaden the scope of copending application number 10/842,842 claims 1-6, respectively, by eliminating the step of determining a bandwidth capacity being based on a first user type selected from a plurality of user types, each of the plurality of user types having a different bandwidth capacity as in claim 1, wherein a second user type download data at a different data transfer speed as in claim 5; and wherein the different data transfer speed is at least one of an integer multiple of 1.5 Mbits/second, an integer multiple of 384 kb/second, or an integer multiple of 192 kb/second as in claim 6.

The application's claims 7-9 merely broaden the scope of copending application number 10/842,842 claims 7-9, respectively, by eliminating the step of determining a user type selected from a set of available user types, each of the available user types associated with a different bandwidth capacity as in claims 7-9.

Art Unit: 2666

The application's claim 10 merely broaden the scope of copending application number 10/842,842 claim 10 by eliminating wherein the data communication capacity is determined based on a type of user selected from a set of available user types as in claim 10.

Likewise, the application's claims 11-16 merely broaden the scope of copending application number 10/842,842 claims 12-17, respectively, by eliminating wherein the data communication capacity is determined based on a type of user selected from a set of available user types as in claim 12.

It has been held that the omission of a element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ (CCPA). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2666

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 1, 5-7, and 10-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Gross (2002/0176367) in view of Price (2002/0163883).

Regarding claims 1, 7, 10-11:

Gross discloses a method of configuring a data network, the method comprising: determining an average peak bandwidth per user value for the data network; determining a capacity of a communication link connecting a digital subscriber line access multiplexer (DSLAM) and an asynchronous transfer mode (ATM) switch; determining an estimated maximum number of users of digital subscriber lines that may be supported by the DSLAM, where the estimated maximum number of users of digital subscriber lines is based on the average peak bandwidth per user value and the capacity of the communication link and configuring the data network such that the DSLAM has a configured number of users of digital subscriber lines that is less than or equal to the estimated maximum number of users of digital subscriber lines (see paragraph 0006 which recite using knowledge of

Art Unit: 2666

network link bandwidth capacities for optimal network management, utilization and provisioning to avoid potential bottlenecks in slow paths and to prevent congestion and for facilitating tunneling, link balancing, among other things, and paragraph 0024 which recite determining bandwidth of packet transmission in the non-time synchronized network).

Regarding claims 5-6:

Gross discloses wherein the estimated maximum number of users of digital subscriber lines is calculated with an assumption of a data transfer speed associated with a plurality of users and wherein the data transfer speed is about 1.5 Mbits/second (see paragraphs 0043-0046 which recite the rate of flow for the users being in the Mbits/second range).

For claims 1, 5-7, and 10-11, Gross discloses all the subject matter of the claimed invention with the exception of determining a data transmission slowdown indicator that includes a slowdown amount and a probability of experiencing a slowdown event; and wherein the estimated maximum number of users that may be supported being based on the slowdown indicator.

Price from the same or similar fields of endeavor teach that it is known to provide the step of determining a data transmission slowdown indicator that includes a slowdown amount and a probability of experiencing a slowdown event; and wherein

Art Unit: 2666

the estimated maximum number of users that may be supported being based on the slowdown indicator (see paragraphs 0014-0017 which recite determining the congestion indicator for preventing call from being made clearly anticipate the data transmission slowdown indicator used for estimating the maximum number of users supported by the link). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide the step of determining a data transmission slowdown indicator that includes a slowdown amount and a probability of experiencing a slowdown event; and wherein the estimated maximum number of users that may be supported being based on the slowdown indicator as taught by Price in the communications method and system of Gross. The step of determining a data transmission slowdown indicator that includes a slowdown amount and a probability of experiencing a slowdown event; and wherein the estimated maximum number of users that may be supported being based on the slowdown indicator can be implemented by providing this step of Price in the bandwidth capacities determining means of Gross. The motivation for providing the step determining a data transmission slowdown indicator that includes a slowdown amount and a probability of experiencing a slowdown event; and wherein the estimated maximum number of users that may be supported being based on the

Art Unit: 2666

slowdown indicator as taught by Price in the communication method and system of Gross being that it provides more efficiency for the system since the system can more gracefully handle congestion by allowing the service provider to determine the approach of congestion so that an actual congestion condition does not arise in the system.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hart et al. disclose a method for channel congestion management.

Jayakrishnan et al. disclose monitoring packet flows.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Monday to Friday with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2666

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH

A handwritten signature in black ink, appearing to read 'Dang Ton', with a long horizontal line extending from the end of the signature.

DANG TON
PRIMARY EXAMINER